

ABSTRACT

Bone such as cortical or cancellous bone or connective tissue are centrifuged as a solution is applied to the tissue in a continuous process. The centrifuge creates forces, which cause the flowing solution to penetrate substantially all of the cavities of the tissue. The solution, which may be alcohol, a detergent, an oxidizer, or a surfactant, with or without water, flushes the cavities of the tissue and removes and inactivates viral and bacterial contaminants. In a second embodiment, bone or connective tissue is centrifuged in a batch process to remove contaminants from cavities in the tissue by first spinning the tissue dry and then submerging the tissue in a viral/bacteria cleansing solution and centrifuging the submerged tissue and solution at a sufficiently high speed and radius from the spin axis to create substantially high G forces on the tissue and solution to force the solution into and through the tissue cavities. The solution with the flushed contaminants is then removed from the vicinity of the tissue. In a further embodiment, an enzyme is centrifuged with the tissue to digest lipids and proteins which are then removed with a flushing solution which may also inactivate viral and bacterial contaminants. In yet a further embodiment, the centrifuge can be used to infuse biologically and/or structurally useful materials into the tissue. Further, the lipids and proteins may be removed by a chemically active agent such as oxo anions.